

THE INTRODUCTION OF ACACIAS INTO CALIFORNIA

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A visitor to almost any city in the milder districts of California, from San Diego County north to Sonoma County and inland, is impressed with the fact that two of the most common ornamental trees are exotics. The acacia and the eucalyptus were brought in so many years ago that they appear quite as much at home as most native trees. Previous to 1849 there were no Australian acacias in California. It may be true that *Acacia Farnesiana* was grown about the Spanish missions at San Diego and Santa Barbara¹ at an earlier date, yet this species is often considered American. The Spanish explorers apparently found it at an early period and ultimately brought it to California by way of Mexico. Paxton in the *Botanical Dictionary* listed this species as having been introduced from San Domingo in 1656. This fact tends to show that early writers associated the first plants of *Acacia Farnesiana* with America, even though the species is now found in many countries.

When gold was discovered in California, people were attracted from all parts of the world. Australians probably brought seeds of the acacia and supplied them to early growers. California nurserymen were soon importing seeds directly from Australia. Many facts regarding these early importations are now available.

Some of the first nurserymen in California had been trained in Europe and were familiar with the acacias already introduced into England. Other nurserymen had English reference books which listed many species. Perhaps most readers of today would be surprised to find a long list of acacias in Paxton's *Botanical Dictionary*, published in London in 1849. When William C. Walker, one of the earliest growers of acacias in California, was making up his catalog for 1858-59 he wrote regarding certain species of Australian trees "not in Paxton's" so we know that these early California nurserymen did use references to check on the acacias which were being imported. Ferdinand von Mueller also began to write of his discoveries in Australia before 1860 so early California nurserymen were able to read about many species of *Acacia*.

Botanical publications furnish dates when various species of *Acacia* were introduced into England. For example, we find that *A. verticillata* was imported into England as early as 1780, *A. pubescens* in 1790, *A. longifolia* in 1792, *A. armata* in 1803, *A. decurrens* var. *mollis* in 1810, *A. melanoxydon* in 1819, *A. cultriformis* and *A. decurrens* var. *dealbata* in 1820. We would naturally ex-

¹ Shinn, Chas. H. An economic study of acacias. U. S. Dept. Agric. Bull. 9: 1-38. 1913.

pect the first California nurserymen to include these species in their first plantings. That was exactly what happened.

To look back over a period of about eighty-five years and say that certain species of acacias were the first to be planted in California may be difficult, yet it is possible to offer some interesting facts. Colonel J. L. F. Warren, the editor of *The California Farmer*, a paper started in 1853, was also a Sacramento nurseryman. He visited various nurseries and gardens in central California and reported his observations. After a visit to the garden of Mrs. C. V. Gillespie in San Francisco, he reported that the acacias grown by this lady were the first in California. During the early fifties Colonel Warren's nursery was at 15 J Street, Sacramento. His catalog was issued here under the name *Warren and Sons Garden and Nurseries*. A copy of this catalog for 1855, located in the Bancroft Library of the University of California, lists "*Acacia armata*," "*Acacia dealbata*," "*Acacia florabunda*," and "*Acacia longifolia*." The spelling of *Acacia longifolia* var. *floribunda* does not agree with modern usage and *Acacia dealbata* is now referred to *Acacia decurrens* var. *dealbata*, but all of the above acacias are easily recognized today. These four species, listed within perhaps two or three years of their introduction, are probably the first Australian acacias in California. *Acacia* seeds were being advertised for sale in 1854 by Colonel Warren, according to Charles H. Shinn¹. Colonel Warren is also reported to have sold plants of *Acacia decurrens* and *A. melanoxyton*. His catalog of 1853-54 does not include *A. melanoxyton* which was, however, listed before 1860.

Acacias sold in early days were soon widely distributed. According to the *The California Farmer*, E. L. Beard had two trees at Mission San Jose in 1855; Dr. Cobb of San Jose had an acacia tree in 1855 that was already 15 feet high and had a spread of 25 feet; Captain Walsh of Benicia and Captain C. M. Webber, founder of Stockton, each had an acacia tree in 1855. The Stockton tree, the editor stated, was only a year old. This would suggest that the others were older.

Reminiscences of early residents are useful in determining dates of introduction, yet memory is sometimes faulty. Lists in old nursery catalogs and advertisements in old papers furnish evidence that is largely beyond dispute. In addition to the catalog of Warren and Sons for 1853, there is a catalog of the "Shell mound Nurseries and Fruit Gardens" for the year 1856 in which the Australian acacia is listed at \$1.00 for plants 12 to 18 inches high. R. W. Washburn was owner and a Mr. Sanford manager of the nursery which was located near Brooklyn, now a part of Oakland, California.

Two brothers, William and James O'Donnell, had a nursery on Mission Street, San Francisco, in the early fifties named "The United States Nursery." According to *The California Farmer* they had in 1856 "two acacias of rare beauty and size" which

they sold at \$50 each. In the same year William O'Donnell moved to San Jose, where he established the "Mountain View Nursery" at 532 William Street between Ninth and Eleventh streets, and there continued to grow the acacia. By 1858, according to the report of the California State Agricultural Society for that year he was growing five thousand acacias.

William C. Walker operated his "Golden Gate Nursery" at Fourth and Folsom streets, San Francisco, until after 1865. He began advertising the acacia as early as 1857 when he reported ten kinds. Until the master copy² of his 1858 catalog was located the species which he offered for sale were unknown. Mr. Walker also listed the acacia seeds brought in late in 1859. But let us go over the species offered for sale in 1858, giving them in the exact order found in the old catalog and with the original spelling. Synonyms recognized today are given in brackets.

Acacia lophantha [Albizzia	Acacia julibrissin [Albizzia
lophantha]	julibrissin]
" speciosa [Albizzia	" dodoenifolia [A.
Lebbek]	dodonaefolia]
" leptophylla [A.	" cornigera
Farnesiana]	" suaveolens
" armata	" trinerva [A. trineura or
" dealbata [A. decurrens	A. trinervata ?]
var. dealbata]	" rugosa [A. rugata or
" latifolia	A. concinna ?]
" verticillata	" melanoxyton [Walker's
" salicifolia [?]	synonym of A. latifolia
" capensis [A. horrida]	probably incorrect]
" longifolia	" vestita
" strombulifera [Prosopis	" barbon (Poinciana Gil-
strombulifera]	lesii) [this is Walker's
" falcifolia [A.	listing]
procumbens]	Silver Wattle [A. decurrens var.
" Farnesiana	dealbata]
" linearis or longissima	Acacia heterophylla

The botanical names given by Mr. Walker may seem a little out of date at this time and yet up to 1900 or later the species of *Albizzia* were still being listed under the genus *Acacia*. Any student of botany who cares to look up the names offered by Mr. Walker will realize that early nurserymen were very well informed for their day, in fact few references of today will include all of the acacias listed in Mr. Walker's catalog of 1858 to 1861.

In 1857 Mr. Walker advertised ten kinds of acacias and five hundred plants. By 1858 the number of species had been more than doubled. By 1861 Mr. Walker was advertising seventy spe-

² Copy of Walker's catalog in possession of Miss Alice Eastwood, California Academy of Sciences, Golden Gate Park, San Francisco.

cies and varieties. No California nurseryman since his time has listed so many Australian acacias. New species have been introduced from time to time but Mr. Walker was one of the greatest specialists in growing acacias that California has ever had. Mr. Walker continued to issue nursery catalogs until 1865 or later and fortunately copies of his 1860, 1861 and 1865 catalogs have been preserved from the estate of Captain C. M. Webber. A list therefore of the seventy kinds of acacias advertised can now be presented. To make checking easier, the species listed by Mr. Walker are here arranged alphabetically with synonyms in brackets. Some species and varieties listed are still of doubtful identity; evidently Mr. Walker listed the same species under different names, not realizing at the time that they were synonymous. In reality there were not seventy distinct species, yet every reader will marvel at the long list of acacias, several of which are still rare or unusual. The following species were listed by Mr. Walker in 1860 and 1861:

Acacia argyrolofera [A. brachybotrya var. argyrophylla ?]	Acacia floribunda latifolia ?
“ armata	“ glandulosa [Prosopis glandulosa]
“ bienana [A. bynoeana ?]	“ glauca pendula [A. pendula var. glaucescens ?]
“ bispinata [A. bispinosa]	“ grandis [A. pulchella var. grandis]
“ caesia	“ Guilfoylia [possibly variety named after M. Guilfoyle]
“ capensis [A. horrida]	“ heteroclada [A. heteroclita ?]
“ celastrifolia [A. myrtifolia var. celastrifolia]	“ heterophylla
“ chordaphylla [A. rigens]	“ hybrida [A. armata]
“ cornigera	“ Hugelii [A. Huegelii]
“ cultriformis	“ impressa
“ cuspidata [A. diffusa var. cuspidata]	“ ixiophylla
“ dealbata [A. decurrens var. dealbata]	“ julibrissin [Albizia julibrissin]
“ decipiens	“ latifolia
“ decurrens [A. decurrens var. normalis]	“ La Trobei [A. acinacea var. Latrobei]
“ dodoenifolia [A. dodonaeifolia]	“ leptophylla [A. Farnesiana]
“ Douglasii [listed by Paxton, 1868]	“ leucophylla [Leucaena glauca]
“ exudens [A. exsudens, A. verniciflua]	“ linearis
“ falcifolia [A. procumbens]	“ linifolia
“ Farnesiana	“ longiflora floribunda [A. longifolia var. floribunda]
“ floribunda [A. longifolia var. floribunda]	
“ floribunda pendula ?	

Acacia longiflora magnifica [possibly a variety of A. longifolia]	Acacia pudalosa [A. paludosa, A. pennata]
" longifolia	" pulchella
" longissima [A. linearis]	" pulchella spinosa [a variety ?]
" lophantha [Albizzia lophantha]	" pyracantha [A. pycnantha ?]
" melanoxydon	" rotundifolia [A. obliqua]
" mimeroides [?]	" rugosa [A. rugata, A. concinna ?]
" molissima [A. decurrens var. mollis]	" salicifolia [A. salicina ?]
" montana	" sophora [A. longifolia var. sophorae]
" monospermum [?]	" speciosa [Albizzia Lebeck]
" mucronata [A. longifolia var. mucronata]	" spectabilis
" myrtifolia	" strombulifera [Prosopis strombulifera]
" myrtifolia elegans [variety of A. myrtifolia ?]	" suaveolens
" nigricans	" trinerva [A. trinervata, A. trineura, A. trinervia ?]
" neiomanii [?]	" verticillata
" paradoxa [A. armata]	" vestita
" pendula	
" pubescens	

A word concerning the prices charged by Mr. Walker may be of interest. In 1858 the following prices were asked: *Acacia linearis* and *Albizzia Julibrissin*, \$5; *Acacia decurrens* var. *dealbata*, \$3-\$5; *A. longifolia*, \$2.50; *A. verticillata* and *A. dodonaefolia*, not priced. In 1860 prices had dropped materially and were quoted as follows: *Acacia armata*, \$1; *A. cultriformis*, \$1.50; *A. decurrens* var. *dealbata*, \$2.50; *Albizzia Julibrissin*, \$2.50; *Acacia verticillata*, \$1.50. Others were not priced, indicating that they may have been scarce.

Seeds of acacia were received by Mr. Walker from Mr. M. Guilfoyle who had established his "Exotic Nursery" at Double Bay, Sydney, about 1852. (His son, W. R. Guilfoyle³, did much to establish the Melbourne Botanical Gardens.) It is possible that Mr. Walker had heard of M. Guilfoyle's nursery through Dr. Herman Behr who had spent several years in Australia and who was active in the Academy of Sciences, San Francisco, as early as 1854. The following kinds of acacia seed were received by Mr. Walker from M. Guilfoyle in 1859 and were later made available for sale: *Acacia cultriformis*, *A. spectabilis*, *A. decurrens* var. *mollis*, *A. verticillata*, and *A. diffusa* var. *cuspidata*. Mr. Walker issued a catalog as late as 1865; his name disappeared from the San Francisco directory about 1867.

The Suscol Nurseries established by Simpson Thompson in 1853 about six miles south of Napa where, some time before, land

³ Information received by author from M. Guilfoyle's daughter, 1935.

had been secured from General Vallejo, are also of interest in connection with the acacia. This nursery sold acacias in 1858, but judging from the catalog of 1861, did not continue to handle them.

About 1860 Stephen Nolan of Oakland established his Belleview Nursery and there started to raise the acacia. Mr. Nolan was born on the Island of Jersey in 1818, and since he was apprenticed in England, he was doubtless familiar with the Australian acacia when he came to California. Before starting his nursery, Mr. Nolan had worked on the Potter estate, and the fact that he later listed a plant, which he considered a hybrid, as *Acacia Potteri* might indicate that he had worked with acacias while there. In addition to growing acacias in his nursery, Mr. Nolan also introduced eucalyptus⁴ about 1860, and in a short time he became one of the most important growers of Australian plants that California has ever had. While we do not know all that Mr. Nolan handled in the sixties, we do have his catalog for 1871⁵. He listed thirty-four species of acacias in that year. Prices ranged from twenty-five cents to seventy-five cents each for most kinds. The following list of species grown by him may be of interest:

Acacia armata [also listed by Nolan as <i>A. undulata</i>]	Acacia leucantha [A. leucantha ?]
“ calamifolia	“ linearis
“ celastrifolia [A. myrtifolia var. celastrifolia]	“ longifolia
“ chordophylla [A. rigens]	“ melanoxylon
“ cultriformis	“ mollissima [A. decurrens var. mollis]
“ dealbata [A. decurrens var. dealbata]	“ prominens [A. linifolia var. prominens]
“ floribunda [A. longifolia var. floribunda]	“ pycnantha
“ homalophylla	“ reclinata [A. leprosa]
“ imbricata [A. lineata]	“ retinodes
“ implexa	“ Sophorae [A. longifolia var. Sophorae]
“ latifolia	“ trinervata
“ leiophylla [A. saligna]	“ verrucosa [A. venulosa ?]

In attempting to give synonyms for old names of *Acacia* there is always some possibility of error. Nurserymen, printers, and others have always had trouble in copying correctly and for certain species several names have been in use. *Acacia floribunda* of the gardens in early days may have been *A. retinodes*. *A. floribunda* is often referred to *A. longifolia* var. *floribunda*. Today we

⁴ Butterfield, H. M. Introduction of Eucalyptus into California. Madroño 3: 149-154. 1935.

⁵ Copy of the catalog in possession of Mrs. W. F. Snyder of Berkeley, daughter of Stephen Nolan.

have both *A. retinoides* var. *floribunda* and *A. longifolia* var. *floribunda* so we can only guess at what early nurserymen meant. *Acacia Reimeri*, possibly named for E. L. Reimers of San Francisco, was mentioned in early literature. This acacia may have been a seedling that differed from the parent plant, or the original label may have been lost and a new name substituted. Considerable variation exists in certain species, and hybrids have been found from time to time, so it would not be strange if these early nurserymen had difficulty in properly classifying certain seedlings; an easy solution was to give a new name.

During the sixties certain additional species of *Acacia* were doubtless imported but little is known about this period. Julius Ferrer¹ of San Francisco, according to his report in the *Pacific Rural Press* at a later date, was growing at his nursery in 1862 the following species: *A. cyanophylla*, *A. cuneata*, *A. decurrens* var. *dealbata*, *A. linearis*, *A. longifolia*, *A. linata*, *A. melanoxydon*, *A. decurrens* var. *mollis*, *A. pendula*, and *A. Riceana*.

Most of the early acacias in California were started from imported seed but some plants also were brought in. As early as 1859 Mr. Walker brought in to San Francisco *Acacia pubescens* in a Wardian case. George Gordon, nurseryman of Menlo Park, imported some trees of *Acacia latifolia* about 1869. Unfortunately these plants were infested with the cottony cushion or white scale (*Icerya purchasi*)⁶. Oranges brought in from Australia at the same time also became infested and, when shipped to southern California, spread this serious insect pest to citrus orchards. It gradually spread throughout the state and by 1877 was attacking acacias in Marin County. Perhaps this experience aided in the development of mineral oil sprays, and it did lead to the introduction from Australia of the Vedalia (*Rodolia cardinalis*), a small red ladybird beetle which preys on this scale.

The change that took place in California gardens from 1860 to 1880 was remarkable. Dr. Herman H. Behr, a friend of Ferdinand von Mueller, who came to California in 1851, became associated with the California Academy of Sciences in San Francisco and was instrumental in introducing the various Australian plants into California. In 1870 W. H. Hall started acacia plantings in Golden Gate Park, setting out twelve hundred trees, representing ten species⁷. While Dr. Behr did not do any of the planting, his friendship with von Mueller probably had something to do with the introductions of the acacias. In 1880 Dr. Behr was led to say, "The vegetation of the peninsula [referring to the peninsula from San Francisco south through San Mateo and Menlo Park] is at present more Australian than Californian."⁷ In later years as many as fifty thousand acacia trees were set out in Golden Gate Park in a single year, partly to help bind the sand and

⁶ Essig, E. O. A history of entomology. p. 119. Macmillan Co., 1931.

⁷ Pacific Rural Press, San Francisco, February 21, 1880.

partly as ornamentals. *Acacia longifolia* was used extensively for this purpose. In time perhaps half a million acacia trees, representing sixty species, were planted in Golden Gate Park. Mr. John McLaren should be honored for his part in this enterprise. Some of these *Acacia* species⁸ are listed below: *A. acinacea*, *A. acuminata*, *A. adunca* (*crassiuscula*), *A. aestivalis*, *A. alata*, *A. armata*, *A. aspera*, *A. Baileyana*, *A. Betchei*, *A. Cavenia*, *A. confusa*, *A. cultriformis*, *A. Cyclops*, *A. decurrens* var. *dealbata*, *A. decurrens* var. *mollis*, *A. dentifera*, *A. Dietrichiana*, *A. dodonaefolia*, *A. elata*, *A. Farnesiana*, *A. fimbriata* (form of *A. linifolia* var. *prominens*), *A. glaucescens*, *A. hastulata*, *A. implexa*, *A. iteaphylla*, *A. juncifolia*, *A. Koa*, *A. leprosa*, *A. lineata*, *A. longifolia*, *A. longifolia* var. *floribunda*, *A. longifolia* var. *latifolia*, *A. longifolia* var. *Sophorae*, *A. melanoxyton*, *A. microbotrya*, *A. obliqua*, *A. oxycedrus*, *A. pendula*, *A. pentadenia*, *A. podalyriaefolia*, *A. pravissima*, *A. prominens* (*A. linifolia* var. *prominens*), *A. pruinosa*, *A. pulchella* var. *hispidissima*, *A. pycnantha*, *A. retinodes*, *A. retinodes* var. *floribunda*, *A. retinodes* var. *gracillima*, *A. Riceana*, *A. salicina* var. *Wayae*, *A. saligna*, *A. stenoptera*, *A. tenuifolia*, *A. verticillata*.

Several nurserymen sold acacias in San Francisco between 1870 and 1880. E. L. Reimers exhibited several of his acacias at the Bay District Horticultural Fair held in San Francisco in 1871, among them *Acacia conspicua* (*A. vestita*), *A. cordata* (trade name not recognized), *A. alata*, *A. pulchella*, and *A. rubra* (*A. rubida* ?)⁹. He had also many of the old favorites.

The Pacific Nursery of San Francisco, operated by F. Lüdemann, included the following species of *Acacia* in a catalog for 1874-75¹⁰: *A. albicans* [*Pithecolobium albicans*], *A. conspicua* [*A. vestita*], *A. farinosa*, *A. fragrans* [*Albizzia fragrans*], *A. La Trobay* [*A. acinacea*, *A. Latrobei*].

With the establishment of the College of Agriculture at the University of California in 1874 a new influence was exerted on horticulture. Landscape men of the old school actually objected to the large number of Australian trees set out on the new campus. Dr. Eugene Hilgard arrived in 1875 to serve as Director, and E. J. Wickson joined him later. Both took an active interest in the distribution of acacias to people throughout California. All through the earlier days of the University standard species such as *A. melanoxyton* and *A. decurrens* or its varieties received much attention. A total of five thousand individuals and 25 species had been planted on the campus by 1875. *Acacia* seeds of new species, such as *A. pulchella* var. *grandis*, were received as early as 1879. In time the institution attracted the attention of such men as Baron von Mueller. We find in the report of the Experiment Station for 1886 that this noted botanist

⁸ List supplied by Miss Katherine D. Jones, College of Agriculture, University of California.

⁹ For detailed list see "The California Horticulturist," 1871.

¹⁰ Catalog in the Bancroft Library, University of California.

sent seeds of *A. sentis* and *A. spectabilis*. It was also in 1886 that seeds of *A. arabica* were received. Dr. Herman Behr and others doubtless assisted in forwarding acacia seeds for further increases. Two years later an inventory of the trees on the campus showed well over twenty species of acacias. Most of those grown were early introductions, but a few such as *A. Cavenia*, *A. Greggii*, *A. imbricata* (*A. lineata*), and *A. Riceana* were not so widely known. The planting of new species of acacias on the campus at Berkeley continued until well after 1900. *Acacia elata* was planted in 1901.¹¹ Specimens of *Acacia cultriformis* and several other species planted at about this time are still living.

In 1885 forestry experiment stations were established at Chico and Santa Monica under the State Board of Forestry. Some acacias were set out before the University of California took over the stations in 1893. At that time *A. retinodes*, *A. cyanophylla*, and *A. latifolia* were doing well but probably many trees had succumbed because of poor care. Planting continued after the University took over the work, especially during the years 1900 to 1910. A survey of the trees at the Santa Monica Forestry Experiment Station in 1917 by W. Metcalf, now extension forester in the College of Agriculture, University of California, showed the following species: *A. arabica*, *A. Baileyana*, *A. binervata*, *A. cultriformis*, *A. cyanophylla*, *A. Cyclops*, *A. decurrens*, *A. decurrens* var. *dealbata*, *A. decurrens* var. *mollis*, *A. Dietrichiana*, *A. elata*, *A. Jonesii*, *A. leprosa*, *A. longifolia*, *A. longifolia* var. *floribunda*, *A. Maidenii*, *A. melanoxyton*, *A. neriifolia*, *A. pruinosa*, *A. pycnantha*, *A. saligna*, *A. verniciflua* (listed as *A. virgata*).

Conditions at the Chico Forestry Experiment Station were not so favorable for acacias and yet attempts were made to grow many species. Some of those growing in 1893 in the nursery¹² are: *A. arabica*, *A. argyrophylla* (*A. brachybotrya*), *A. Bartheriana* (*A. Berteriana*), *A. capensis*, *A. cyanophylla*, *A. dodonaefolia*, *A. glauca* (*A. glaucescens*), *A. glomerata* (*A. glomerosa* ?), *A. holocericena* (*A. holocericca* ?), *A. leucocephala* (*Leucaena glauca*), *A. lophantha* (*Albizzia lophantha*), *A. lunata*, *A. melanoxyton*, *A. monophylla* (?), *A. ornithoflora* (*A. armata* ?), *A. ovalifolia* (?), *A. peregrina* (*Piptadenia peregrina* ?), *A. pycnantha*, *A. spectabilis* var. *excelsa*, *A. trinervis* (*A. trineura* or *A. trinervata* ?).

For several years after 1885 nurserymen showed very little interest in new species of acacias. Here and there a nurseryman would include some new species, but no large number was added. John Rock, who came to San Jose in 1865 and helped start the California Nursery at Niles in 1885, had doubtless seen California horticulturists wax enthusiastic about Australian acacias, yet he always showed only a moderate interest by listing a few popular species. In 1888 Mr. Rock included *A. falcata* in his catalog.

¹¹ Jones, Katherine D. Acacias in California. National Horticultural Magazine. January, 1933.

¹² California Agricultural Experiment Station Report. 1893.

Many years later, in 1915, his successors were still adding a few new species such as *A. Baileyana*, *A. juniperina*, *A. neriifolia*, and *A. podalyriaefolia*, but the additions were made cautiously and in accordance with demand. The handling of new species of ornamentals is not always profitable. Introduction of other new species had to await the interest of enthusiastic plant importers such as Dr. F. Franceschi (Dr. F. Fenzi) and E. O. Orpet of Santa Barbara, or of horticulturists connected with some institution not dependent on the financial outcome, such as Golden Gate Park or the University of California.

The history of the introduction of acacias into California is by no means limited to central California, even though the first acacias were grown near San Francisco and Oakland. Several nurserymen and private growers in Santa Barbara, Los Angeles, and San Diego counties have imported new species. The following listed by Dr. Franceschi and P. Reidell in their catalog for 1908 and later were of special interest: *A. accola*, *A. Baileyana*, *A. elongata*, var. *angustifolia*, *A. extensa*, *A. leptoclada*, *A. obliqua*, *A. pendula*, *A. penninervis*, *A. podalyriaefolia*, *A. pravissima*, *A. subulata*. Other plants listed with these in the 1908 catalog were *Pithecolobium flexicaulis*, *Acacia corymbosa* and *A. notabile* (*A. notabilis* ?).

Mr. E. O. Orpet of Santa Barbara has grown some interesting species of *Acacia* in recent years, including *A. Bakeri*, *A. obtusata*, and *A. mucronata*. *Acacia pulcherrima* reported growing at Mr. Orpet's nursery is probably *Stryphnodendron floribundum*.

Still another important center of introduction in southern California is to be found about San Diego where Miss Kate Sessions, T. Wayland Vaughn and others have shown an active interest in novelties. Mr. Vaughn has been associated with Scripps' Institute of Oceanography where such species of *Acacia* as *A. cardiophylla*, *A. decurrens* var. *Leichardtii*, *A. falcata*, *A. flexifolia*, *A. hakeoides*, *A. leptoclada*, *A. linifolia* var. *prominens*, *A. nonuttiana* (?), and *A. viscidula* have been grown. Other *Acacia* species reported about San Diego include *A. aneura*, *A. Bancrofti*, *A. Betchei*, *A. decora*, *A. decurrens* var. *pauciglandulosa*, *A. penninervis*, and *A. polybotrya* var. *foliolosa*. The San Diego climate should prove to be very favorable for some of these less common species.

The United States Department of Agriculture, through the Office of Foreign Seed and Plant Introduction, has imported certain species of *Acacia*. Several of these are native to Africa and are of questionable ornamental value. Others listed have been grown previously, but the reintroduction of *Acacia* species has taken place many times and we can expect many will be reintroduced in the future. Perhaps only a few of the three hundred Australian species are really adapted to California and only a few will live for any long period.

Inquiry is often made as to the location of old acacia trees in California. Most acacias are shallow-rooted and interfere with the growth of other plants near by; they also clog sewers at

times and break sidewalks. For such reasons the trees are often removed while still young. Low winter temperatures which occur occasionally have wiped out many acacias, the freeze of 1913 having killed most of those at the Chico Forestry Experiment Station, and the freeze of 1933 having killed all of the acacias on the State Capitol grounds at Sacramento. Very old acacias have been removed in cities as business enterprises grew and needed space, and even under favorable conditions some of the species introduced would not have survived very long in California. These several factors help to account for the scarcity of old acacias in the state.

A few old trees of *Acacia melanoxylo*n planted in 1879 are still growing along Berkeley streets. One of these trees now measures 2.9 feet in diameter breast high and is 70 feet tall. Old trees of *Acacia verticillata* are also found in Berkeley. Probably old acacia trees are still alive in other parts of California. Readers are invited to report such specimens, giving the age and any interesting facts associated with their introduction. Readers can assist also in completing this story of the Australian *Acacia* in California by reporting rare species not included in this record.

College of Agriculture,
University of California,
November, 1936.

HARRY STANLEY YATES

Harry Stanley Yates, the only child of Francis Frederick Yates of Kidderminster, England, and Jennie Gibson Yates of Worcester, Massachusetts, was born in Marshall, Minnesota, on October 2, 1888, and died in Berkeley, California, January 17, 1938. The family came to California in 1890 and settled on an orange ranch near Pomona. In 1912 he was married to Alice B. Weber, a botanist and a fellow member of the University of California class of 1912. Dr. Yates is survived by his wife, his daughter, Elizabeth Yates Biernoff, and his son, Francis Gordon Yates.

After graduating from Pomona High School in 1908, he attended the University of California at Berkeley, graduating in 1912. The degrees Master of Arts and Doctor of Philosophy were conferred upon him by the University of California in 1914 and 1915. He was a life member of the Malayan Branch, Royal Asiatic Society, and of the National Geographic Society, a charter member of the California Botanical Society, and a member of the University of California chapter of Sigma Xi.

Upon receiving his doctor's degree he accepted a position as mycologist for the Bureau of Science, Manila, Philippine Islands. After spending five years in this position he became research botanist for the United States Rubber Company on its plantation at Kisanan, Asahan, Dutch East Indies, East Coast Sumatra. In 1929 he returned to the United States with his family, and in